

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
7 October 2004 (07.10.2004)

PCT

(10) International Publication Number
WO 2004/086387 A1

(51) International Patent Classification⁷: **G11B 7/125,**
H05B 33/08, H01S 5/068

(21) International Application Number:
PCT/IB2004/050304

(22) International Filing Date: 22 March 2004 (22.03.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
03100798.2 27 March 2003 (27.03.2003) EP

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(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
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TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

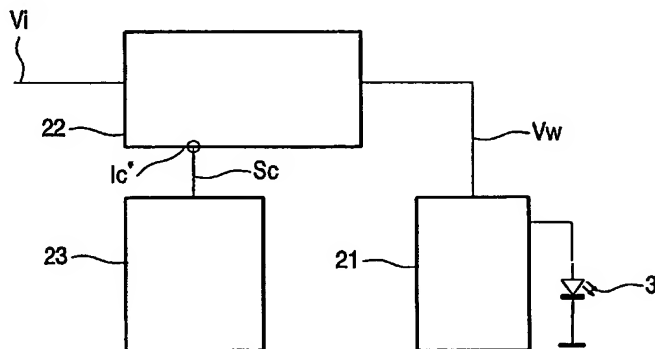
(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), Euro-
pean (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,
GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK,
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— as to applicant's entitlement to apply for and be granted
a patent (Rule 4.17(ii)) for the following designations AE,
AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,
CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE,

[Continued on next page]

(54) Title: RADIATION SOURCE DRIVING DEVICE AND METHOD FOR DRIVING A RADIATION SOURCE



(57) Abstract: The invention pertains to a radiation
source driving device for controlling a voltage fed to a
radiation source in an information reproducing system
comprising a radiation source controller for controlling
the voltage fed to the radiation source, and a power
supply for providing a working voltage to the radiation
source controller. In prior art systems the working
voltage fed to the radiation source controller must be
high enough to be able to give enough power to the
radiation source in all situations. Thus the working
voltage must be equal to a worst case situation wherein
the radiation source is fed with a maximum voltage
in order to achieve maximum power. In situations
wherein the radiation source does not need maximum
voltage the working voltage over the control circuit is

higher than needs to be for that situation. This extra voltage drop results in power dissipation thereby increasing the temperature of the control circuit and its environment. As increasing speeds require higher radiation powers and the radiation source performance diminishes rapidly with temperature, the temperature control at the radiation source becomes of increasing importance. According to the invention the power supply comprises a control input for controlling the working voltage to the radiation source controller and in that the radiation source driving device further comprises power supply control means for generating a control signal which is fed to the control input of the power supply wherein the control signal is dependent on the voltage fed to the radiation source. If the voltage fed to the radiation source is relatively high, then the radiation source driving device needs a relatively high working voltage to be able to feed the relatively high voltage to the radiation source without the driver output saturating due to the voltage generated across the radiation device. If however the voltage fed to the radiation source is relatively low, then it suffices to feed the radiation source driving device with a relatively low working voltage. By supplying the radiation source driving device with a relatively low working voltage when it does not require a relatively high working voltage, the result is that the average voltage drop over the radiation source driving device is reduced. This has the effect that power dissipation by the radiation source driving device is reduced and therefore the heat generation of the device is reduced.

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EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT,

LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

Published:

— with international search report

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